

## **ABSTRACT OF THE DISCLOSURE**

The present invention is directed to a heartbeat apparatus via a remote mirroring link for a multi-site and a method for using the heartbeat apparatus. Information is registered in a configuration table, wherein the configuration table stores host ID information and volume ID information. The configuration table is configured, access requests from a host are verified, host activity is recorded, and additional records are created in the configuration table when a match is found between the access records and the registered information. In a multi-site having two, three or more sites in a multi-hoop configuration, a failover process with remote mirroring pairs is performed by configuring a correlation between a remote mirroring pair group, an activity monitor function and an alert function, wherein the alert function is performed by a host sending status information regarding activity monitoring in a storage system and retrieving the notification information via a plurality of data links, and creating a status manage table using the notification information.